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USSN: 10/521,827
Group Art Unit: 1775
Docket No.: 58046US012

Remarks

Claims 1, 6, 7, 27 and 30 are amended, and claims 17-31 have been withdrawn. Thus, claims 1-16 are under consideration in this application. Support for the amendment to claim 1 may be found in the written description at, e.g., paragraph [0039] and in the examples. Support for the amendment to claims 6 and 7 may be found in the written description at, e.g., paragraphs [0041] and [0042]. No new subject matter is added. Reconsideration of the rejections is requested in view of the amendments, and the following remarks.

Claims Rejections under 35 U.S.C. § 112

Claims 1-16 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Office Action states:

- I. *Regarding claims 1-16, it is unclear whether the list of specific definitions of terms, provided in the Specification at paragraphs 23-32, defines claim terminology, or do these definitions not limit the claim terminology?*

The definitions at paragraphs 23-32 are provided to define terms that appear in several claims (see the phrases "we refer to", and "we mean", etc.). Claims 1-16 are not indefinite.

- II. *Regarding claim 1, it is unclear whether the described structure involving a support, a metal layer, and a protective layer necessarily requires that the "extensible metal or metal alloy layer" is sandwiched by the support and protective layer or whether the three layers may be arranged having any one layer between the other two.*

The specification recites that "A crosslinked polymeric layer lies atop the first metal layer, and serves as a protective corrosion-resistant topcoat **122** if no other metal layers are present and as a spacing layer such as layer **118** if additional metal layers are employed" (see paragraph [0042], page 9, lines 11-14). In addition, when referring to one embodiment disclosed

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in Fig. 2, the specification also recites that an "Extensible visible light-transparent metal layer 116 made of silver lies atop support 112. Protective layer 122 made of a crosslinked acrylate polymer lies atop metal layer 116" (see paragraph [0034], page 6, lines 1-3). Applicants note that in another embodiment the films of the invention can include a polymer base coat layer between the support and the metal layer (see paragraph [0035] page 6, lines 4-7). Accordingly, the metal layer lies atop the support or the optional spacing layer and the protective layer lies atop the metal layer. Claim 1 is not indefinite.

III. *Regarding claim 5, it is unclear whether the claimed two layers describe layers in addition to the "extensible metal or metal alloy layer" or whether the claimed two layers may or may not be "extensible metal or metal alloy layer."*

Claim 5 states the film comprises "two or more metal or metal alloy layers." This phrase means that, in addition to the extensible metal or metal alloy layer recited in claim 1, there is at least one additional metal or metal alloy layer in the film.

IV. *Regarding claim 6, it is unclear what is the antecedent basis of the phrase "the layers." Which layers are these?*

Claim 6 is amended to recite "the metal or metal alloy layers are separated" to indicate that the "layers" that are separated by the polymeric spacing layer are the metal or metal alloy layers.

V. *Regarding claim 7, line 3, it is unclear what role the phrase that starts with " , or " plays in terms of claim grammar and structure of the claimed article. Does the phrasing following "or" refer to an alternative "wherein" condition or to alternative composition of the "adjacent layer" mentioned in line 2. If the former, what constitute so-called "adjacent layers?" Can an "adhesion-enhancing treatment" imply forming a layer of a new material, or must it be a modification of an already formed layer? Should the comma be eliminated? It is unclear whether the increased corrosion resistance is to be obtained under all circumstances or only upon the invocation of "one or more adjacent layers within the film comprise an adhesion-enhancing adjuvant."*

Applicants have added the term "wherein" to indicate that the phrase following the " , or " refers to an alternative "wherein" condition. The "adjacent layer" refers to a layer next to the recited metal or metal alloy layer. The Examiner is directed to paragraph [0040] which recites

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treatments (see the specification at pages 7-8) and paragraph [0041] which recites additives (see specification at page 9). The "whereby" clause refers to the two listed alternatives, treatments or additives. Claim 7 is not indefinite.

VI. *Regarding claims 8-10, it is unclear what is meant by the phrase "an electromagnetic shielding capability that is retained." Does this claimed retention require no diminution in capacity or merely some finite amount of capability?*

In regard to the phrase "an electromagnetic shielding capability that is retained" in claims 8-10, applicants note that electromagnetic shielding films are typically designed to prevent emission of electromagnetic radiation from escaping a device or to block incoming electromagnetic radiation from entering a device. Thus, this phrase would be understood by a person having ordinary skill in the art to require that some finite amount of the electromagnetic shielding capacity of the film is retained such that the film will function as intended. Thus the phrase is clear. Claims 8-10 are not indefinite.

Applicants submit that, in view of the amendments and remarks herein that the objections under 35 U.S.C. § 112 are overcome.

Claim Rejections under 35 U.S.C. § 103

Claims 1-3 and 7-14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Chapman et al. (U.S. Patent No. 4,965,408). The Office Action states:

Claims 1-3 and 7-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chapman et al. USPN 4,965,408. Chapman teaches a metal layer sandwiched between a support, including flexible and thermoplastic materials, and a protective layer. See Chapman (col. 3, line 20 through col. 4, line 33). Chapman suggests a polymeric protective layer that may be comprised of reacted together, i.e., cross-linked, polymeric materials. See Chapman (col. 3, lines 20-39). Chapman suggests applying the formed laminate permanently to curved objects such as luggage and furniture. See Chapman (col. 5, lines 27-64). Hence, it would have been obvious to one of ordinary skill in the art at the time of the invention to make the articles of Chapman from cross-linked polymeric protective layer materials and to form structures having permanently deformed curved geometries, as Chapman suggests that effective articles may be fabricated in this manner.

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The laminates are disclosed as not being able to block all incident radiation. (See Office Action at page 4, paragraph no. 9.)

The Examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the Examiner does not establish a *prima facie* case, the applicant is under no obligation to submit evidence of non-obviousness, see MPEP § 2142. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves, or in the knowledge generally available to one skilled in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations, see MPEP § 2142.

Reconsideration is requested. As amended, claim 1 recites that the metal or metal alloy layer is formed by deposition. Chapman et al. do not disclose the formation of metal or metal alloy layers by deposition. Instead, Chapman et al. disclose that the composite material has two or more layers laminated together. Formation of the metal or metal alloy layer by deposition is different from lamination of a metal foil to a polymer support. Thus, the Chapman et al. disclosure fails to disclose all elements of the claim.

Chapman et al. repeatedly recite the use of a layer of metal foil (see, for example, column 3, line 11, lines 40-41, column 5, line 31-35 and Example 1, column 7, lines 57-59). A person having ordinary skill in the art would not have a reasonable expectation of success that a conductive film on a flexible support, having an extensible metal or metal alloy layer, could be formed by a deposition process based on the metal foil laminated polymer films in Chapman et al.

The Examiner also states that, at col. 3, lines 20-39, Chapman et al. suggests a "polymeric protective layer that may be comprised of reacted together, i.e., cross-linked, polymeric materials."

Applicants disagree. Chapman et al. does not state or imply that the copolymer film disclosed can or should be crosslinked. At col. 3, lines 20-39, Chapman et al. states;

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"The covering material can also be a copolymeric film, wherein 'copolymeric' as used herein means any combination of two or more polymeric materials blended together, reacted together, extruded together, or otherwise combined."

Applicants' specification recites that "polymer chains are joined together by covalent chemical bonds, usually via crosslinking molecules or groups, to form a network polymer."

Typically, crosslinking is the formation of chemical links between molecular chains to form a three-dimensional network of connected molecules. The formation of chemical links via crosslinking the polymer chains is normally accomplished with monomers having two or more reactive moieties. Each moiety of a monomer can react with a different polymer chain. This can provide intermolecular covalent bonding between polymer chains, linking them together.

Chapman et al. do not disclose crosslinking of the polymer layer and do not disclose crosslinking monomers. A search of the text of the patent (obtained from the USPTO website) failed to locate the term crosslink, crosslinker, or crosslinking agent in the Chapman et al. disclosure. There is no disclosure or reasonable inference that two polymers "reacted together" would provide a crosslinked copolymer film.

Thus, Chapman et al. fails to disclose all elements of claim 1 and there is no suggestion in Chapman et al. to prepare conductive films having a metal or metal alloy layer formed by deposition.

In view of the amendments and remarks herein, it is respectfully requested that the rejection of claims 1-3 and 7-14 as being unpatentable under 35 U.S.C. §103(a) over Chapman et al. be withdrawn.

Allowable Subject Matter

Applicant notes with appreciation the Examiner's indication that claims 4-6, 15, and 16 would be allowable if rewritten to overcome the objections under 35 U.S.C. § 112 and to include all of the limitations of the base claim and any intervening claims. Applicants submit that, in view of the amendments and remarks herein that the rejection under 35 U.S.C. § 103 and

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objections under 35 U.S.C. § 112 are overcome, and that all claims are in condition for allowance. Thus, it is respectfully requested that the claims pass to issue.

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Conclusion

Applicants request reconsideration and withdrawal of the rejections and passage of the application to the issue branch. The Examiner is invited to contact the undersigned attorney at telephone number (612) 455-2564 if there are any questions regarding this Response or if prosecution of this application may be assisted thereby.

Respectfully submitted on behalf of

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